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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/888,544	06/25/2001	Lance W. Russell	10003533-1	9456

7590 07/11/2006

HEWLETT-PACKARD COMPANY  
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EXAMINER

BARQADLE, YASIN M

ART UNIT PAPER NUMBER

2153

DATE MAILED: 07/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/888,544	RUSSELL, LANCE W.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Yasin M. Barqadle	2153	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 May 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,4-6,12,13,19 and 21-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-6,12,13,19 and 21-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

**Response to Amendment**

In view of the Appeal Brief filed on March 01, 2006, **PROSECUTION IS HEREBY REOPENED**. A new ground of rejection set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

- Claims 3, 7-11, 14-18 and 20 have been canceled.
- Claims 1,2,4-6, 12-13, 19 and 21-27 are presented for examination.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

As per claims 1-2,4-6, 12-13, 19, 23-24, and 26-27, are rejected under 35 U.S.C. 103(a) as being unpatentable over Vahalia et al US Pub. Number (20050251500), hereinafter "Vahalia" in view of Koyanagi et al US Pub. Number (20010013067), hereinafter "Koyanagi".

As per claims 1, 4, 12-13, 19, 23 and 26, Vahalia teaches a method of accessing a data file in a distributed computing environment (fig. 4 and abstract), comprising:

in response to a request from a client site for access to a data file stored in one or more physical storage systems at a source site, sending from the source site to the clients site physical address meta data including physical addresses of one or more logical blocks of the data file in the one or more

Art Unit: 2153

physical storage systems (file server includes data movers and data storage with file systems in a cached disk array. In response to client request for a metadata, a metadata including pointers are returned to where the data to be accessed is stored are returned ¶ 0056), and routing meta data ("The invention provides a method of accessing a file in a data network. The data network includes a client and a server and data storage. The data storage including data storage locations for storing data of the file. The data network has an Internet Protocol (IP) data link between the client and the server. The data network also has a high-speed data link between the client and the data storage. The high-speed data link bypasses the server. The method includes the server managing metadata of the file; the client using a file access protocol over the IP data link to obtain metadata of the file from the server, the metadata including information specifying the data storage locations for storing data of the file; and the client using the information specifying the data storage locations for storing data of the file to produce a data access command for accessing the data storage locations for storing data of the file. The method further includes the client using a high-speed data protocol over the high-speed data link to send the data access command to

Art Unit: 2153

the data storage to access the data storage locations for storing data of the file." ¶0015). (See also ¶ 81-89).

Although Vahalia shows substantial features of the claimed invention including IP data network between a client and a server for accessing data storage (0015-0017) and proxy router by forwarding NFS data packets from/to a client to/from a data mover that owned the file system (0048), he does not explicitly show a routing meta data comprising a next hop node along one or more network routes between the client site and the source site

Nonetheless, this feature is well known in the art and would have been an obvious modification of the system disclosed by Vahalia, as evidenced by Koyanagi et al USPN. (20010013067).

In analogous art, Koyanagi whose invention is about a data transmission apparatus for transmitting data received from a user terminal device through a plurality of networks to a destination, the user terminal device executing communication using an Internet protocol. The data transmission apparatus includes a routing table storing information relating a destination address of the data and addresses of the plurality of networks, discloses a routing table storing information relating a destination address including next hop node (figs. 5B, fig. 6 and figs.24A-C). Giving the teaching of Koyanagi, a person of ordinary skill in the art would have readily

Art Unit: 2153

recognized the desirability and the advantage of modifying Vahalia by employing the routing system of Koyanagi to provide a method of selecting an appropriate network based on static and dynamic information about a plurality of networks, thereby enabling data transmission through the appropriate network.

As per claim 2 and 13, Vahalia teaches the invention, further comprising storing at the source site a data structure comprising the physical address meta data and the routing meta data for one or more logical file blocks of the requested data file (file server includes data movers and data storage with file systems in a cached disk array. In response to client request for a metadata, a metadata including pointers are returned to where the data to be accessed is stored are returned fig. 3 and ¶ 0056.)

As per claims 5, 24 and 27, Vahalia teaches the invention, wherein the routing meta data comprises complete path information from the client site to the source site for each of the one or more network routes (¶ 0079 and 0096).

Art Unit: 2153

As per claim 6, Vahalia teaches the method of claim 1, where the metadata is sent to the client site in accordance with a routing network protocol (§0015-0017).

Claims 21,22, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vahalia et al (US Publication Number 20050251500, hereinafter "Vahalia") in view of Koyanagi et al and further in view of Kato USPN. (6223249).

As per claims 21,22, and 25, although Vahalia and Koyanagi show substantial features of the claimed invention including "a secondary data mover to access data of a file over a data path that bypasses the Owner, the secondary data mover must obtain metadata of the file in addition to a distributed lock over the file. In the preferred implementation, the metadata is exchanged between an Owner and a secondary data mover as part of the data-mover level distributed file locking protocol. The metadata includes the disk block numbers of the file. The disk block numbers are pointers to the disk storage locations where the file data resides" (§ 0160), they do not explicitly show physical address parameters including disk number and sector number.



Art Unit: 2153

Nonetheless, this feature is well known in the art and would have been an obvious modification of the system disclosed by Vahalia and Koyanagi as evidenced by Kato et al USPN. (6223249). In analogous art, Kato whose invention is about a method for controlling access to one or more disc storage devices, discloses physical address parameters including disk number and sector number (figs 10A-B). Giving the teaching of Kato, a person of ordinary skill in the art would have readily recognized the desirability and the advantage of modifying Vahalia and Koyanagi by employing the system of Kato so as to control access to a plurality of discs storing a plurality data and to determine which discs will store each of a plurality of the sub-blocks and information comprising addresses of the sub-blocks stored on the discs and size of each of a plurality of the sub-blocks in such a manner that the overhead at the time of accessing data on a disc device can be reduced.

### **Conclusion**

The prior made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yasin

Art Unit: 2153

Barqadle whose telephone number is 571-272-3947. The examiner can normally be reached on 9:00 AM to 5:30 PM.

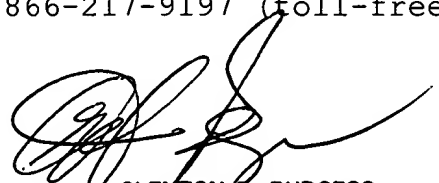
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Burgess can be reached on 571-272-3949. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either private PAIR or public PAIR system. Status information for unpublished applications is available through private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

YB

Art Unit 2153



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